

## **Smart Products, Smart Consumers**

Performance Task

### **Introduction**

Your community is having an invention contest. The winner of this contest will be given a chance to have their inventions manufactured and sold in a local store. You will want to make sure that your invention will be unique and interesting so that people will want to buy it. You and your team have decided to study what products your local community may be interested in. Remember, new inventions and products can make our lives easier. Once you decide on what you will invent, you will need to create a model that you can enter into the contest for the judges to see.

### **Big Idea / Essential Questions**

#### **Big Idea**

- A technological world requires that humans develop capabilities to solve technological challenges and improve products for the way we live.
- Technological design is a creative process that anyone can do which may result in new inventions and innovations.
- Technology is created, used and modified by humans. Technological literacy is the ability to use, assess and manage technology around us.

#### **Essential Questions**

- How does the engineering design process help humans create new inventions and innovations?
- How do human wants and needs affect the products that are used and created?
- In what ways do humans create, use and modify technologies?

### **G.R.A.S.P.**

#### **Goal**

Your goal is to study what types of products would make the lives of the people in your community easier. You want your invention/product to win the invention contest.

#### **Role**

You are part of a team of young inventors who want to create a new and helpful invention for the community.

#### **Audience**

Your audience will be the people who live in the community and the judges for the

invention contest.

## Situation

Your community is having an invention contest. The contest winners will be given a chance to have their inventions manufactured and sold in a local store. You want to make your invention stand out and be interesting to the people who may want to buy it. Your invention will become your product. You and your team have decided to study what products your local community may want to make their lives easier. Once you find out, you will create a model that you will enter in the contest.

## Products

### 1. Illustration

#### Suggested starting product:

Illustrate a picture of an invention that you use in your daily life. Be sure to label your picture and give it a title.

- What is an invention?
- What is your favorite invention that you use?
- What is the most helpful invention that you use?

#### Illustration - Smart Products, Smart Consumers

Achievement Levels	1	2	3
<b>Illustration</b> (x1)	Illustration and title are unclear and are not connected to the concept.	Illustration and title are somewhat clear and demonstrate minimal connection to the concept.	Illustration and title are clear and demonstrate connection to the concept.

### 2. Research

Study and research to find areas of need or want in your community. Watch people in the neighborhood, in their work places, or on the playground. What kinds of products could you invent that would make their daily activities easier or better? When you are at school, think of the things that would help students finish their work more efficiently. Also, what things could you invent that would make the custodians' life or the cafeteria staff's lives easier? Keep a notebook to collect and record your notes and ideas.

- How do inventions help people?
- What are things that people need?
- What is the difference between what people need and what people want?

#### Research - Smart Products, Smart Consumers

Achievement Levels	1	2	3
<b>Notebook Research</b> (x1)	Notebook is not very organized and does not contain much important information.	Notebook is somewhat organized and contains some important information.	Notebook is very organized and contains important information.

Achievement Levels	Social Studies Connection		
	1	2	3
(x1)	Demonstrates an excellent understanding of the differences between the needs and wants of people.	Demonstrates some understanding of the differences between the needs and wants of people.	Demonstrates an excellent understanding of the differences between the needs and wants of people.
Science Connection	Demonstrates little understanding of design by asking questions, making observations, and gathering information to define problems and find solutions.	Demonstrates some understanding of design by asking questions, making observations, and gathering information to define problems and find solutions.	Demonstrates an excellent understanding of design by asking questions, making observations, and gathering information to define problems and find solutions.
(x1)			

### 3. Product Prototype

First, you should draw a picture of your invention making sure to include all of its dimensions. Then you may create a model of your invention using useful classroom supplies if available. This model will be your prototype. Be sure you are able to explain its function and how it will improve the lives of those who use it.

- What does your invention look like?
- How can your invention be measured?
- What does your invention to help people?

#### Prototype - Smart Products, Smart Consumers

Achievement Levels	1	2	3
Model/Prototype (x2)	Model does not quite represent a prototype for an invention idea. Model does not include a drawing.	Model somewhat represents an adequate prototype for an invention idea. Drawing includes some details and dimensions.	Model is an excellent prototype for the invention idea that includes a detailed drawing with dimensions.
Science and Technology (x1)	Student shows little understanding that technology and inventions are designed to help people and society.	Student shows some understanding that technology and inventions are designed to help people and society.	Student shows excellent understanding that technology and inventions are designed to help people and society.
Explanation (x1)	Student provides very little explanation of their work and does not provide the function of the invention or how it can help others.	Student provides some explanation of their work and may provide some function of the invention and how it can help others.	Student provides an excellent explanation of their work by providing the function of the invention and how it can help others.

### 4. Advertisement

Create a commercial for your product. Your product is your invention. Make sure you explain what it is and how using it will make life better. Be sure to hook your audience with a catchy phrase or jingle. Also, include the cost of the product and where it will be available for purchase. You can record your commercial and play it for the class (you can use any type of technology to do this), or perform it live.

- Why is your invention unique?
- How will your invention help people?
- How do the parts of your invention function?

#### Advertisement - Smart Products, Smart Consumers

Achievement Levels	1	2	3
Organization and Creativity	The advertisement is not very organized	The advertisement is somewhat	The advertisement is organized and very
(x1)			

Achievement Levels	1	2	3
<b>Social Studies</b> (x1)	Advertisement does not show understanding that technology and inventions can improve the lives of people and society.	Advertisement shows some understanding that technology and inventions can improve the lives of people and society.	Advertisement shows excellent understanding that technology and inventions can improve the lives of people and society.
<b>Content</b> (x1)	Commercial contains very little information and does not hook the audience.	Commercial contains some important information which may hook the audience.	Commercial contains excellent information and easily hooks the audience.

## 5. Oral Presentation

Create an oral presentation that explains the creation process and the purpose of your new invention. Be sure to explain why your product will make life better for those who use it!

- What is your invention?
- Why did you create this invention?
- How will your invention work?
- What is the purpose of your invention and who will use it?

### Oral Presentation - Smart Products, Smart Consumers

Achievement Levels	1	2	3
<b>Content and Details</b> (x2)	Presentation does not include accurate information about the new product and/or how it will make life better for those who use it. There are not many pictures or details that enhance the presentation.	Presentation contains few facts about the new product and how it will make life better for those who use it. Few pictures are included to enhance the presentation.	Presentation contains many facts about the new product and how it will make life better for those who use it. Many pictures are included to enhance the presentation.
<b>Science Connection</b> (x1)	Student shows little understanding that technology and inventions are designed to help people and society.	Student shows some understanding that technology and inventions are designed to help people and society.	Student shows excellent understanding that technology and inventions are designed to help people and society.
<b>Oral Presentation</b> (x1)	Student provides very little explanation of their work and does not provide the function of the invention or how it can help others.	Student provides some explanation of their work and may provide some function of the invention and how it can help others.	Student provides an excellent explanation of their work by providing the function of the invention and how it can help others.

## 6. Journal Prompt

### Suggested final product:

Tell me what you learned from inventing a product that people want and need in their daily lives.

- What did you learn about inventions?
- How do inventions help people?
- What inventions do you use that improve your daily life?

### Journal Prompt - Smart Products, Smart Consumers

Achievement Levels	1	2	3
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(x1)

1

A majority of sight words are spelled correctly. Demonstrates an attempt at phonetic construction of unknown words. Minimal capitalization and/or punctuation are used.

3

(x1)

Response contains some accurate, factual information about the topic.

Response contains excellent information or details about the topic.

(x1)

Response shows some understanding of how technology and inventions can improve the lives of people and society.

Response shows excellent understanding of how technology and inventions can improve the lives of people and society.